

W5YI REPORT

Up to the minute news from the worlds of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

Dits & Bits

Fred Maia, W5YI, Editor, P.O. Box 10101, Dallas, TX 75207

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New 420/50 MHz Protection Zones
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Commercial Ham Exam Materials
and much, much more!



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August 15, 1984

Ham Campaign Mounted To Save 220-Mhz Band

The FCC Private Radio Bureau decision to consider reallocating some or all of the amateur 220-225 Mhz band to the Land Mobile service has caused an outpouring of ham support to retain the band. Art Reis, K9XI, (editor of 220 Notes, a publication for 1-1/4 meter users) hastily assembled a unique teleconference radio network on August 2nd that linked ham repeaters in the major hotbeds of 220 operation - New York, Chicago, Los Angeles and Dallas.

The purpose of the conference was to review the current 220-MHz situation and to plan some sort of organized opposition towards retaining the band in its current format. The effort will include a letter writing campaign to the FCC opposing 1-1/4 meter reallocation and contacting Congressmen urging that the matter be investigated. The subject of political awareness was stressed by Personal Communications Foundation President Joseph Merdler, N6AHU and included a presentation by noted Chicago ham attorney Jim O'Connell, W9WU.

The teleconference lasted some 2 hours and used facilities provided by Rockwell Telecommunications. It was sponsored by the Chicago Area Broadcast Employees Amateur Radio Club and the Rockwell Repeater Group. Reiss said his publication (220 Notes) will head up the "Keep 220 Campaign" and interested amateurs could contact him at: 308

Eastgate Court in New Lenox, Illinois 60451.

SOURCE OF THE RECENT 220 ANXIETY....

The current concern for the future of the 220-225 MHz ham band was touched off by four events that happened very recently. First, the Land Mobile Communications Council, a non-profit association of land mobile users and providers of services filed a petition on June 18th seeking more spectrum. The LMCC did not specifically ask for the 220-MHz ham band - only that the FCC consider it.

Second, on July 16th, Sideband Technology, Inc of Scottsville, New York. (STI) submitted a "Petition for Spectrum Reallocation" asking for 6-MHz of spectrum "for exclusive use by narrowband transmission systems" (ACSB - amplitude campandered sideband) in the Land Mobile Radio Services. The requested 6-MHz was from 216-222 MHz and included a 2 megahertz slice of the 1-1/4 meter ham band.

Third, on July 20th, STI filed an addendum to their original petition. It included professionally prepared charts of government frequency assignments and ham repeater use between 216 and 225 MHz. These charts clearly show significant activity between 216 and 220... and 222 and 225 MHz. Virtually none between 220 and 222 MHz.

Fourth, on July 21st, Bob Foosaner, Chief of the FCC's Private Radio Bureau in a speech given at the ARRL National Convention publicly acknowledged (although not for the first time) that they were indeed exploring an option that could reallocate amateur 220-MHz band spectrum to "accomodate the ever increasing Land Mobile needs of the country."

Thus, in a month's time the VHF amateur community has gone from spectrum complacency to excited and agitated concern. Let's look into the two petitions filed by the LMCC (assigned RM-4829) and STI (RM-4831)... as well other facts that preceded.

JUST WHO IS THE LMCC?

Make no mistake about it, the Land Mobile Communications Council is a very well organized, funded and powerful group. They are essentially made up of other business, common carrier, and public safety radio user associations including: APSCO (Assoc. Public Safety Communications Officers), Electronic Industries Association, Cellular Communications Industry Assoc., American Trucking Assoc., American Petroleum Institute, American Automobile Assoc., International Assoc. of Fire Chiefs, International Taxicab Assoc., NABER (National Assoc. of Business and Educational Radio), Assoc. of American Railroads... to name just a few. Frankly, all of them have their own interest foremost in mind. Social "chit-chat" on 220-MHz doesn't seem very important to them when they desperately need spectrum to conduct business and coordinate emergencies.

The LMCC 38-page petition filed June 18th was signed by a drafting committee including one Joseph Rosenbloom of the IBM Corporation. It documented a need for approximately 32 MHz of spectrum and suggested that the Commission permit the use of the 800-MHz frequencies which were originally "reserved" for future land mobile needs. This need was documented by the Commission ten years ago (Docket 18262.) The FCC predicted a spectrum "shortfall" - even considering such sophisticated technologies as "trunking, digital, cellular and narrowband" radio.

WARC ALLOCATIONS OF 220-225 MHZ

WARC provisions were made for sharing the 220-MHz ham band with the Land Mobile Service. It was a surprise when this happened (WARC closed on December 6, 1979) and the amateur community is only now realizing what this might mean. It is also interesting to note that the new (and presently unallocated) amateur 902-928 MHz band is also a Land Mobile shared band and the possibility exists that ham operation may never be allowed there at all! The Commission is overflowing with petitions for 900-MHz use.

In addition, the LMCC said that the FCC "may wish to explore the potential use of vacant spectrum in the UHF TV bands, spectrum allocated for Federal Government use, or assignments from the 220-225 MHz (amateur band) to satisfy the requirements of land mobile users." On page 9 of their petition the LMCC does say, however, that even if the FCC reallocated 2-MHz of spectrum from the 216-225 MHz band a spectrum "shortfall" would still exist.

THE LAND MOBILE RESERVE....

The final recommendation of the Land Mobile Communications Council is, however, that the spectrum needed for land mobile operations should come from the "800-MHz reserve". The "Land Mobile Reserve" includes UHF channels 70 through 83 (806-890 MHz) and additional spectrum through 960 MHz. (Note that the new WARC 902-928 MHz ham band is in this "reserve.")

The issue of spectrum for land mobile is clouded by the fact that there are nine different petitions for radio services that the FCC is considering right now that will use frequencies from the land mobile reserve. Among them are an air-to-ground telephone service aboard commercial air liners, additional cordless phone spectrum, a rail passenger telephone service, a mobile satellite service, PRCS (discussed elsewhere in this issue) and the 902-928 MHz ham band. Clearly the Commission did not consider these services when planning land mobile needs through the end of this century.

If the FCC acted positively on all of these requests, the land mobile reserve would be exhausted. The issue of who gets what in the way of spectrum is really a sticky situation to deal with. The LMCC has even suggested that the FCC may want to expand the reserve down to 614 MHz - thereby reducing the UHF-TV band even further. Broadcast interests are sure to oppose this. The Government has 24% of the spectrum between 30 MHz and 1000 MHz and the LMCC notes that the Government might make some of this available for non-Government use.

LMCC DISCUSSES 1-1/4 METER HAM BAND

Another reference to the 220-MHz amateur band appears at page 32 of their petition. It mentions that the FCC said in a Final Report (Docket 82-10) that the 220-225 MHz amateur band "is only lightly used" and that "if narrowband 5-KHz channelization were employed in 2-MHz of the band 220-225 MHz, 200 duplex channels could be created with a standard base/mobile frequency separations of 1 MHz."

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The document refers to an FCC August 1983 report entitled "Future Private Land Mobile Telecommunications Requirements" that concluded that additional radio channels would be needed over the next 17 (now 16) years. The report noted that "a portion of these channels could be generated by deriving new narrowband channels from existing PLMRS (Private Land Mobile Radio Service) spectrum."

The FCC went on to say that "to meet projected requirements, the Commission would have to reallocate spectrum." The FCC proposal for reallocation included portions of the 216-225 MHz band for narrowband systems using 5-KHz channeling.

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The NTIA also suggested that narrowband techniques share this band with the Amateur Service." They pointed out (and documented) that "the 216-225 MHz band is not extensively used" throughout the United States.

Thus, the STI petition merely seeks implementation of the NTIA and FCC proposals. The Commission is already proposing spectrum efficient ACSB (narrow band SSB) in the 150 MHz land mobile band. The NTIA said that 150-MHz equipment could easily be modified to 220-MHz operation and that transmission characteristics were the same.

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"I am a currently licensed Extra Class amateur radio operator and wish to be a Volunteer Examiner. I have never had my station or operator license revoked or suspended. I do not own a significant interest in nor am an employee of any company or entity engaged in making, preparing or distributing amateur radio equipment or license preparation materials. My age is at least 18 years old."

WOULD YOU LIKE TO BE AN VOLUNTEER EXAMINER under The W5YI Report program. If so, please send a copy of your Extra-Class (only) license and a SASE to: W5YI - VEC, PO Box #10101, Dallas, Texas 75207 Our next issue will cover HOW TO GIVE A HAM TEST." using testing materials available in the marketplace.

FCC ISSUES NEW VEC INSTRUCTIONS....

All VEC's received a package from the FCC this past week containing information concerning handling "Reimbursement of Out-of-Pocket Costs for Volunteer Administered Amateur Radio Examinations." The new instructions were postdated August 31, 1984, and take into consideration the new rules allowing expense recoupment.

The following is a recap of the points that will prove most interesting to you....

(1.) - Test Design: The ARRL originally suggested that the VEC (Volunteer Examiner Coordinator) design the amateur radio operator tests rather than the FCC. The Capitol Hill Amateur Radio Society petitioned to eliminate the requirement that the FCC select the questions from the test pool.

Effective August 31, 1984, the VEC will select the questions from the pool. Beginning January 1, 1987, Volunteer Examiners may also design (select the questions) to the General, Advanced and Extra Class examinations. (Note the word "may" - the VEC can also do it.)

(2.) - Identifier (suffix) Codes for upgraded applicants are being changed to "KT" for Technician, "AG" for General Class, "AA" for Advanced Class and "AE" for Amateur Extra Class. Thus a Technician that passes a General Class examination will sign "temporary AG" after his call sign on voice - "/AG" on CW. Temporary operating authority is extended to one year or until the applicant's upgraded operator license is received whichever comes first..

(3.) - Any type of Morse code test can be given at 13 and 20 wpm including solid copying for one continuous minute and message content examinations. CW sending tests are optional since the FCC has found that receiving Morse code text is evidence enough of sending ability.

(4.) - Examination Cost Reimbursement up to a maximum of \$4.00 is authorized. This amount will adjusted each January 1 "for changes in the Department of Labor Consumer

Price Index."

The FCC refused to specify who should collect the fee. "We envision that the VE's and the VEC's will develop a close working relationship and will be able to decide themselves what works best for them," the FCC said. "They must decide what portion of the fee each will get."

Volunteer Examiners may not be compensated for their services and no out-of-pocket expenses in connection with the Novice Class license can be reimbursed. It is not necessary that any fee be returned to applicants who fail to show up for an examination session.

(5.) - Reimbursable Expense List will not be published by the FCC. "We believe it is inadvisable to attempt to pinpoint permissible or prohibited reimbursable expenses. Any list that we compiled would necessarily be incomplete. Rather, the guideline that we establish is that if the expense relates to the amateur radio operator examination, it is a legitimate reimbursable expense."

(6.) - Expense Records must be kept by both the VE's and VEC's if reimbursements are sought for expenses incurred. "They must certify on or before January 31 of each year to the Commission's office in Gettysburg, PA 17325 that all expenses for the period from January 1 to December 31 of the preceding year for which reimbursement was obtained were necessarily and prudently incurred."

It is not necessary to submit a detailed expense breakdown to the FCC, but these records must be retained by each VEC and VE for 3 years and made available to the FCC upon request.

(7.) - VE Expense Certifications: "Each Volunteer Examiner must forward on or before January 15 of each year the certification concerning expenses to the VEC who coordinated the efforts of the VE and for which reimbursement was received. The VEC must forward all such certifications and its own certification concerning expenses to the FCC on or before January 31 of each year." The VEC must disaccredit any volunteer examiner who fails to provide the annual certification.

If the FCC acted positively on all of these requests, the land mobile reserve would be exhausted. The issue of who gets what in the way of spectrum is really a sticky situation to deal with. The LMCC has even suggested that the FCC may want to expand the reserve down to 614 MHz - thereby reducing the UHF-TV band even further. Broadcast interests are sure to oppose this. The Government has 24% of the spectrum between 30 MHz and 1000 MHz and the LMCC notes that the Government might make some of this available for non-Government use.

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rowband users, but no new wideband (25 MHz) FM systems would be authorized."

Technical standards for 216-225 MHz land mobile operation included: 3.6 KHz bandwidth, power output up to 350 watts, transmitters equipped with "power limiting devices"... amplitude compandored sideband (ACSB) technology.

STI said that they thought the reallocation of 216-222 MHz to private land mobile use "was in keeping with the need expressed by the Commission to reallocate spectrum requirements of the PLMRS through the year 2000" and, at the same time, "provide an incentive to the introduction of narrowband technologies, such as ACSB, in the land mobile market by making new narrowband spectrum available.

The public comment period on both petitions for rulemaking expire on August 29th with reply comments due on or before September 13.

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ANOTHER NO CODE PETITION DEISMISSED

The FCC has denied and dismissed a May 11th petition for rulemaking filed by Dennis M. Dutton, WB2CSJ, of Tavares, Florida.

Dutton proposed that an additional class of amateur radio operator license not requiring a demonstration of proficiency in the international Morse code. Specifically, Dutton wished to amend Section 97.5 to add a new Intermediate class of amateur operator license between the Novice and Technician classes.

The petitioner claimed that the international Radio Regulations, Article 32, "gives the Commission not only the right to make these amendments, but also the responsibility." Dutton further claimed that present usage of frequencies above 30 MHz with the exception of 144 to 148 MHz are practically nil. He states that a new group of technically oriented amateur radio operators is needed to fulfill the basis and purpose of the Amateur Radio Service.

In an Order released August 2nd, Robert S. Foosaner, Chief of the FCC Private Radio Bureau said, "The Commission recently addressed the matter of establishing a class of amateur operator license not requiring a demonstration of proficiency in the international Morse code in PR Docket No. 83-28... and considered the provisions of Article which permit, but do not require, administrations to waive the Morse code requirement for Amateur stations which make exclusive use of frequencies above 30-MHz. The Commission also considered the actual usage of Morse code in all amateur bands. The slow speed Morse code requirement for entry into the Amateur Radio Service was found not to constitute a significant barrier to potential applicants."

In dismissing the petition Foosaner said that "the Commission had already devoted extensive consideration to the issue raised by Mr. Dutton... his petition presents no new facts or issues to warrant further consideration."

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ALASKA FIXED SERVICE & HAM RADIO

Many individuals in remote parts of Alaska rely on their HF radios as the only available form of communications. The Alaska Fixed Service (a new name) is a direct descendent of the Air Force's Alaska Communications System (ACS.)

It serves the unique needs of Alaska's "bush" communities which have no form of conventional telephone service available to them, and who must rely on the nearest cannery or fishing village's HF radio transceiver for communications facilities.

The FCC is amending Part 97.61(b13) to change the calling and listening frequency that may be used for emergency communications by amateur stations (and others) authorized by the State of Alaska to operate in the Alaska Fixed Service.

The current frequency of 4383.8 kHz is being changed to 5167.5 kHz. The change was made since many HF radios are unable to receive and/or transmit on 4383.8 kHz. A 24-page Report and Order was released by the FCC on August 3rd covering the new service.

PRCS - LOW COST MOBILE PHONE SERVICE

The Private Radio Bureau has completed work on PRCS - the Personal Radio Communication Service. The issue was supposed to have been acted on at the July 19th FCC Agenda meeting. Tension mounted as everyone waited in anticipation to determine what the Commission had in store for the public who desperately need a low cost telephone service in their automobiles. The comment period on the PRCS Notice of Proposed Rulemaking closed a year ago. Now, decision time.

But it was not to be. Intense last minute lobbying by various manufacturers (particularly Motorola) and industry groups (along with "campaigns" and Congressional inquiries) caused the PRCS rulemaking to be delayed until after the traditional FCC recess.

I called the Private Radio Bureau and asked Ray Kowalski in the Special Services Division about why it did not appear on the agenda as scheduled. He would not confirm (or deny) that it was due for consideration during July since it never appeared as a scheduled item on the "Sunshine Agenda" - the list of items (required by law) that the FCC Commissioners will be ruling on.

My sources tell me that Motorola got advance information that the Commissioners were going to consider the PRCS matter and used Congressional and other pressure to postpone it. The FCC staff appears to be in the position of strong PRCS recommendation. How the Commissioners would have voted on it hard to say.

There is both considerable support and powerful opposition to the measure. And there are also nine petitions competing for 900-MHz spectrum to contend with. The PRCS proposal is only one of them. The Commission decided to take more time to consider their options.

The FCC Commissioners are on vacation during the month of August. It now appears that the FCC will not get to PR Docket 83-26 until mid-September - although some insiders feel it could be later.

JUST WHAT IS PRCS?

PRCS is a revolutionary low-cost mobile telephone service which uses technology not too much unlike that of cordless telephones. It will be regulated under a new Part 96 of the Commission's rules sandwiched in between CB and amateur radio. Everyone will be eligible to operate individual PRCS units. Similar to the present CB service, no licenses will be required although users must be at least 18 years old.

On the surface, it appears that the technology is simple. Calls are routed to and from your regular home telephone to a remote location - most commonly... your car although hand-held units are authorized. Unlike amateur radio telephone auto-patches, PRCS can be used for virtually any purpose including business matters.

BACKGROUND ON PRCS....

The concept was originally proposed by the General Electric Company two years ago and has been receiving close FCC attention ever since. GE's professionally done PRCS petition ran to some 200 pages. After the FCC reviewed it, they killed the 900-MHz CB issue (PR Docket 79-140) and replaced it with the GE proposal.

PRCS has elicited a big response from the cellular radio industry who regard it as a threat to their financial future. The cost of PRCS mobile telephone service to the public is far lower than that of cellular - in fact, up to ten times lower! It is estimated that PRCS equipment (both base and remote units) will cost only \$350-\$400 with telephone line charges being only the user's regularly paid phone bill.

In other words, no additional cost unless the user elects to use a repeater to increase range. Even then, a user can own his own repeater..., share or subscribe to one. One estimate had commercial repeater service priced at \$10 a month - not much for a phone in your car.

PRCS OPPOSITION AND SUPPORT....

Cellular radio units cost up to \$4,000

rowband users, but no new wideband (25 MHz) FM systems would be authorized."

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HAM OPERATOR EXAMINATION QUESTIONS are available from The W5YI Report
A booklet containing all of the PR Bulletin-1035 series FCC Amateur Radio Operator Study Guide and
All 1600 actual test questions for all ham classes (Novice through Extra Class) are available from:
THE W5YI REPORT - P.O. Box #10101 - Dallas, Texas 75207
(Cost is \$2.50 postpaid....)

TECHNICAL CHARACTERISTICS OF PRCS....

All PRCS radio equipment must be type accepted... that is, approved by the FCC. Proposed were 133 channels (5 control, 30 direct, 97 repeater and one "party line" channel (or PLC) in two 4-MHz wide bands (898-902 MHz and 937-941 MHz.) This is just above and below the new WARC approved (but as yet unauthorized) 902-928 MHz ham band. It also raises some interesting possibilities for modified PRCS equipment use on amateur spectrum.

The control channels automatically do the switching... assigning calls to vacant channels. General Electric originally suggested 151 channels (5 control, 32 direct and 112 repeater channels using two 4.5-MHz segments.)

Transceiver - Modulation: FM, Bandwidth: 30-kHz, Maximum transmitter power: 10 watts. Additional power amplification not allowed. Frequency crystal controlled.

Repeater - Maximum ERP (effective radiated power) - 30 watts (800 foot antenna height above average terrain), 60 watts (400 to 800 foot antenna height) or 100 watts (antenna up to 400 feet above average terrain.) Antenna must be vertically polarized with height not more than 20 feet above the building or tree it is mounted on. Must be licensed. Can repeat only initiated or addressed communications - retransmission of another repeater station is prohibited. Must not be interconnected to the telephone system.

We will keep you posting on any late breaking PRCS developments.

COMM. ACT REWRITE AFFECTS JAMMERS

A proposed amendment to the Communications Act of 1934 could put jammers in jail. Congressman Jim Bates of San Diego, California, will soon be introducing a bill that would amend the Communications Act to make willful and malicious interference a criminal offense, rather than just the administrative violation that it is now.

The concept behind the proposed amendment was originated by San Diego attorney, Jim Allen, W6OGC, who upon reading the complete and unabridged text of the Communications Act found that the subject of willful and malicious interference had not been dealt with.

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W5YI REPORT.....

Page #5

August 15, 1984

PRCS - LOW COST MOBILE PHONE SERVICE

The Private Radio Bureau has completed work on PRCS - the Personal Radio Communication Service. The issue was supposed to have been acted on at the July 19th FCC Agenda meeting. Tension mounted as everyone waited in anticipation to determine what the Commission had in store for the public who desperately need a low cost telephone service in their automobiles. The comment period on the PRCS Notice of Proposed Rulemaking closed a year ago. Now, decision time.

But it was not to be. Intense last minute lobbying by various manufacturers (particularly Motorola) and industry groups (along with "campaigns" and Congressional inquiries) caused the PRCS rulemaking to be delayed until after the traditional FCC recess.

I called the Private Radio Bureau and asked Ray Kowalski in the Special Services Division about why it did not appear on the agenda as scheduled. He would not confirm (or deny) that it was due for consideration during July since it never appeared as a scheduled item on the "Sunshine Agenda" - the list of items (required by law) that the FCC Commissioners will be ruling on.

My sources tell me that Motorola got advance information that the Commissioners were going to consider the PRCS matter and used Congressional and other pressure to postpone it. The FCC staff appears to be in the position of strong PRCS recommendation. How the Commissioners would have voted on it hard to say.

There is both considerable support and powerful opposition to the measure. And there are also nine petitions competing for 900-MHz spectrum to contend with. The PRCS proposal is only one of them. The Commission decided to take more time to consider their options.

The FCC Commissioners are on vacation during the month of August. It now appears that the FCC will not get to PR Docket 83-26 until mid-September - although some insiders feel it could be later.

JUST WHAT IS PRCS?

PRCS is a revolutionary low-cost mobile telephone service which uses technology not too much unlike that of cordless telephones. It will be regulated under a new Part 96 of the Commission's rules sandwiched in between CB and amateur radio. Everyone will be eligible to operate individual PRCS units. Similar to the present CB service, no licenses will be required although users must be at least 18 years old.

On the surface, it appears that the technology is simple. Calls are routed to and from your regular home telephone to a remote location - most commonly... your car although hand-held units are authorized. Unlike amateur radio telephone auto-patches, PRCS can be used for virtually any purpose including business matters.

BACKGROUND ON PRCS....

The concept was originally proposed by the General Electric Company two years ago and has been receiving close FCC attention ever since. GE's professionally done PRCS petition ran to some 200 pages. After the FCC reviewed it, they killed the 900-MHz CB issue (PR Docket 79-140) and replaced it with the GE proposal.

PRCS has elicited a big response from the cellular radio industry who regard it as a threat to their financial future. The cost of PRCS mobile telephone service to the public is far lower than that of cellular - in fact, up to ten times lower! It is estimated that PRCS equipment (both base and remote units) will cost only \$350-\$400 with telephone line charges being only the user's regularly paid phone bill.

In other words, no additional cost unless the user elects to use a repeater to increase range. Even then, a user can own his own repeater..., share or subscribe to one. One estimate had commercial repeater service priced at \$10 a month - not much for a phone in your car.

PRCS OPPOSITION AND SUPPORT....

Cellular radio units cost up to \$4,000

with additional high telephone line charges... (35 to 40 cents a minute!) It is little wonder that cellular radio makers (such as Motorola) and telephone companies (such as AT&T) are so opposed to it. It will cost them a bundle in sales since most travelling done by the public is within telephone range of PRCS technology.

Motorola spent a fortune for a 63-page study entitled an "Assessment of the Proposed Personal Radio Communications Service." It was completed by the noted (and respected) Booz Allen & Hamilton consulting firm. They called PRCS "poorly conceived"... "technically unsuitable" to meet the public's mobile telephone needs and "an imitation cellular service."

It is the FCC Chairman's office that sets the Agenda and it is to his office that the Booz-Allen report was addressed. It was reported to me that the report was submitted in a "very irregular way". It wasn't delivered to the FCC secretary and apparently was not filed as an "ex-parte" proceeding which is required when a Commissioner is approached on rule making under consideration. There are also rumors about missing FCC documents and a whole volume of PRCS comments!

PRCS PROTOTYPE SYSTEM AUTHORIZED....

It should be pointed out that cellular service allows unlimited range from virtually anywhere since it ties into the telephone system from cells located across the nation. This "cell network" is just now in the process of being set up. PRCS range will be unlimited as long as you are within 25 miles of your home using repeater service - about 5 miles without. Again, you are merely extending the range of your home telephone.

The FCC has already granted an experimental license to General Electric to begin operation of a prototype PRCS system in the Syracuse, New York, area this fall. Some have interpreted this to mean that the Commission is indeed ready to approve the service. The public is still unaware that low-cost car telephones may be in their future. If the service gets FCC approval, the stampede will be on!

The Personal Radio Communication Service is not meant to - nor will it - replace CB radio and/or GMRS. Neither of these services allow automatic tie in into the PSTN (public switched telephone network.) PRCS while appearing simple, is a very sophisticated service based on the principles of "trunking." The radio equipment will first try to complete the phone call via a direct channel. If this can't be accomplished, then a repeater path is automatically chosen.

Incoming calls can be routed to cars - or you can originate mobile phone calls. Unlike the new cellular systems, PRCS only allows user premises telephone interconnection. Repeater stations can not be connected directly to the PSTN like an amateur autopatch system. PRCS repeaters will merely retransmit signals of user stations to extend their communications range. A person trying to reach a PRCS user can only do so by dialing the user's home phone and reaching them providing they are within range.

PRCS WILL BE SELF-REGULATING....

Special control channels assign the conversations to vacant channels. Proposed by the FCC in Docket 83-26 are 30 LTCs (local talk channels,) 97 RTCs (repeater talk channels) and what amounts to a single CB channel. A carefully selected set of technical standards and regulations make the service basically self-regulating...

(1.) - The user's equipment automatically times and limits conversations during periods of heavy loading.

(2.) - A special user-selected "binary digital combination" assures that only you can use your telephone while mobile.

(3.) - Interference is reduced by automatic transmitter power cut-back when a received signal strength is above a certain threshold level.

(4.) - PRCS units and repeater stations automatically identify during each transmission. (The last four digits of the serial number becomes the ID.)

W5YI REPORT.....

Page #7

August 15, 1984

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We will keep you posting on any late breaking PRCS developments.

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rowband users, but no new wideband (25 MHz) FM systems would be authorized."

Technical standards for 216-225 MHz land mobile operation included: 3.6 KHz bandwidth, power output up to 350 watts, transmitters equipped with "power limiting devices"... amplitude compandored sideband (ACSB) technology.

STI said that they thought the reallocation of 216-222 MHz to private land mobile use "was in keeping with the need expressed by the Commission to reallocate spectrum requirements of the PLMRS through the year 2000" and, at the same time, "provide an incentive to the introduction of narrowband technologies, such as ACSB, in the land mobile market by making new narrowband spectrum available.

The public comment period on both petitions for rulemaking expire on August 29th with reply comments due on or before September 13.

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ANOTHER NO CODE PETITION DEISMISSED

The FCC has denied and dismissed a May 11th petition for rulemaking filed by Dennis M. Dutton, WB2CSJ, of Tavares, Florida.

Dutton proposed that an additional class of amateur radio operator license not requiring a demonstration of proficiency in the international Morse code. Specifically, Dutton wished to amend Section 97.5 to add a new Intermediate class of amateur operator license between the Novice and Technician classes.

The petitioner claimed that the international Radio Regulations, Article 32, "gives the Commission not only the right to make these amendments, but also the responsibility." Dutton further claimed that present usage of frequencies above 30 MHz with the exception of 144 to 148 MHz are practically nil. He states that a new group of technically oriented amateur radio operators is needed to fulfill the basis and purpose of the Amateur Radio Service.

In an Order released August 2nd, Robert S. Foosaner, Chief of the FCC Private Radio Bureau said, "The Commission recently addressed the matter of establishing a class of amateur operator license not requiring a demonstration of proficiency in the international Morse code in PR Docket No. 83-28... and considered the provisions of Article which permit, but do not require, administrations to waive the Morse code requirement for Amateur stations which make exclusive use of frequencies above 30-MHz. The Commission also considered the actual usage of Morse code in all amateur bands. The slow speed Morse code requirement for entry into the Amateur Radio Service was found not to constitute a significant barrier to potential applicants."

In dismissing the petition Foosaner said that "the Commission had already devoted extensive consideration to the issue raised by Mr. Dutton... his petition presents no new facts or issues to warrant further consideration."

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ALASKA FIXED SERVICE & HAM RADIO

Many individuals in remote parts of Alaska rely on their HF radios as the only available form of communications. The Alaska Fixed Service (a new name) is a direct descendent of the Air Force's Alaska Communications System (ACS.)

It serves the unique needs of Alaska's "bush" communities which have no form of conventional telephone service available to them, and who must rely on the nearest cannery or fishing village's HF radio transceiver for communications facilities.

The FCC is amending Part 97.61(b13) to change the calling and listening frequency that may be used for emergency communications by amateur stations (and others) authorized by the State of Alaska to operate in the Alaska Fixed Service.

The current frequency of 4383.8 kHz is being changed to 5167.5 kHz. The change was made since many HF radios are unable to receive and/or transmit on 4383.8 kHz. A 24-page Report and Order was released by the FCC on August 3rd covering the new service.

HAM OPERATOR EXAMINATION QUESTIONS are available from The W5YI Report
A booklet containing all of the PR Bulletin-1035 series FCC Amateur Radio Operator Study Guide and
All 1600 actual test questions for all ham classes (Novice through Extra Class) are available from:
THE W5YI REPORT - P.O. Box #10101 - Dallas, Texas 75207
(Cost is \$2.50 postpaid....)

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The Private Radio Bureau concluded that Plageman "did an unlawful act", that he knew what he was doing and intended to disrupt transmissions. In view of this the FCC suspended his Extra Class amateur operator license for a period of one year and revoked his station license. The FCC has taken the position that intentional interference is never justified no matter the reason.

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This recent action brings to a close the illegal and disruptive jamming by this San Diego radio operator who at one time held a valid amateur radio license, N6BII but had it revoked in 1979 following a history of deliberate and malicious interference dating back to 1961.

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While the FCC normally handles amateur interference problems by way of administrative procedures involving violation notices and fines, it became necessary to take the firm

action applied in this case to silence the continued disruptive operations following the repeated warnings of the Commission and area amateurs.

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420-450 MHz RADIO PROTECTION ZONES

The NTIA in response to a government request has asked the FCC to add two additional military air bases to the list of "radio protected" areas. The protected areas are necessary to safeguard stations in the Government Radiolocation Service, which have primary operating status in the 420-450 MHz band. The Commission released an Order on August 6, 1984, advising the public and changing various applicable rules - including Part 97.61(b7).

Case-by-case coordination is currently the standard procedure for all amateur stations that use more than 50 watts within the protected areas surrounding major Government radiolocation (radar) operations. This process precludes operations that would cause harmful interference to the military radar stations and assures that information concerning potential interference sources is readily available.

The two new military installations requiring 420-450 MHz radio protection are Warner-Robins Air Force Base in Georgia and Goodfellow AFB in Texas. Other protected military areas include Eglin AFB (Florida), Pacific Missile Test Center, (Point Mugu, California), Otis AFB (Massachusetts), Beale AFB (California), Elmendorf AFB (Alaska), and Offutt AFB (Nebraska.) As a general rule, the protected area extends out 100 - 150 miles from the military base.

W5YI - VEC, PO Box #10101, Dallas, Texas 75207
Our next issue will cover HOW TO GIVE A HAM TEST.
using testing materials available in the marketplace.

W5YI REPORT.....

Page #9

August 15, 1984

FCC ISSUES NEW VEC INSTRUCTIONS....

All VEC's received a package from the FCC this past week containing information concerning handling "Reimbursement of Out-of-Pocket Costs for Volunteer Administered Amateur Radio Examinations." The new instructions were postdated August 31, 1984, and take into consideration the new rules allowing expense recoupment.

The following is a recap of the points that will prove most interesting to you....

(1.) - Test Design: The ARRL originally suggested that the VEC (Volunteer Examiner Coordinator) design the amateur radio operator tests rather than the FCC. The Capitol Hill Amateur Radio Society petitioned to eliminate the requirement that the FCC select the questions from the test pool.

Effective August 31, 1984, the VEC will select the questions from the pool. Beginning January 1, 1987, Volunteer Examiners may also design (select the questions) to the General, Advanced and Extra Class examinations. (Note the word "may" - the VEC can also do it.)

(2.) - Identifier (suffix) Codes for upgraded applicants are being changed to "KT" for Technician, "AG" for General Class, "AA" for Advanced Class and "AE" for Amateur Extra Class. Thus a Technician that passes a General Class examination will sign "temporary AG" after his call sign on voice - "/AG" on CW. Temporary operating authority is extended to one year or until the applicant's upgraded operator license is received whichever comes first..

(3.) - Any type of Morse code test can be given at 13 and 20 wpm including solid copying for one continuous minute and message content examinations. CW sending tests are optional since the FCC has found that receiving Morse code text is evidence enough of sending ability.

(4.) - Examination Cost Reimbursement up to a maximum of \$4.00 is authorized. This amount will adjusted each January 1 "for changes in the Department of Labor Consumer

Price Index."

The FCC refused to specify who should collect the fee. "We envision that the VE's and the VEC's will develop a close working relationship and will be able to decide themselves what works best for them," the FCC said. "They must decide what portion of the fee each will get."

Volunteer Examiners may not be compensated for their services and no out-of-pocket expenses in connection with the Novice Class license can be reimbursed. It is not necessary that any fee be returned to applicants who fail to show up for an examination session.

(5.) - Reimbursable Expense List will not be published by the FCC. "We believe it is inadvisable to attempt to pinpoint permissible or prohibited reimbursable expenses. Any list that we compiled would necessarily be incomplete. Rather, the guideline that we establish is that if the expense relates to the amateur radio operator examination, it is a legitimate reimbursable expense."

(6.) - Expense Records must be kept by both the VE's and VEC's if reimbursements are sought for expenses incurred. "They must certify on or before January 31 of each year to the Commission's office in Gettysburg, PA 17325 that all expenses for the period from January 1 to December 31 of the preceding year for which reimbursement was obtained were necessarily and prudently incurred."

It is not necessary to submit a detailed expense breakdown to the FCC, but these records must be retained by each VEC and VE for 3 years and made available to the FCC upon request.

(7.) - VE Expense Certifications: "Each Volunteer Examiner must forward on or before January 15 of each year the certification concerning expenses to the VEC who coordinated the efforts of the VE and for which reimbursement was received. The VEC must forward all such certifications and its own certification concerning expenses to the FCC on or before January 31 of each year." The VEC must disaccredit any volunteer examiner who fails to provide the annual certification.

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Fourth, on July 21st, Bob Foosaner, Chief of the FCC's Private Radio Bureau in a speech given at the ARRL National Convention publicly acknowledged (although not for the first time) that they were indeed exploring an option that could reallocate amateur 220-MHz band spectrum to "accomodate the ever increasing Land Mobile needs of the country."

Thus, in a month's time the VHF amateur community has gone from spectrum complacency to excited and agitated concern. Let's look into the two petitions filed by the LMCC (assigned RM-4829) and STI (RM-4831)... as well other facts that preceded.

JUST WHO IS THE LMCC?

Make no mistake about it, the Land Mobile Communications Council is a very well organized, funded and powerful group. They are essentially made up of other business, common carrier, and public safety radio user associations including: APSCO (Assoc. Public Safety Communications Officers), Electronic Industries Association, Cellular Communications Industry Assoc., American Trucking Assoc., American Petroleum Institute, American Automobile Assoc., International Assoc. of Fire Chiefs, International Taxicab Assoc., NABER (National Assoc. of Business and Educational Radio), Assoc. of American Railroads... to name just a few. Frankly, all of them have their own interest foremost in mind. Social "chit-chat" on 220-MHz doesn't seem very important to them when they desperately need spectrum to conduct business and coordinate emergencies.

The LMCC 38-page petition filed June 18th was signed by a drafting committee including one Joseph Rosenbloom of the IBM Corporation. It documented a need for approximately 32 MHz of spectrum and suggested that the Commission permit the use of the 800-MHz frequencies which were originally "reserved" for future land mobile needs. This need was documented by the Commission ten years ago (Docket 18262.) The FCC predicted a spectrum "shortfall" - even considering such sophisticated technologies as "trunking, digital, cellular and narrowband" radio.

WARC ALLOCATIONS OF 220-225 MHZ

WARC provisions were made for sharing the 220-MHz ham band with the Land Mobile Service. It was a surprise when this happened (WARC closed on December 6, 1979) and the amateur community is only now realizing what this might mean. It is also interesting to note that the new (and presently unallocated) amateur 902-928 MHz band is also a Land Mobile shared band and the possibility exists that ham operation may never be allowed there at all! The Commission is overflowing with petitions for 900-MHz use.

In addition, the LMCC said that the FCC "may wish to explore the potential use of vacant spectrum in the UHF TV bands, spectrum allocated for Federal Government use, or assignments from the 220-225 MHz (amateur band) to satisfy the requirements of land mobile users." On page 9 of their petition the LMCC does say, however, that even if the FCC reallocated 2-MHz of spectrum from the 216-225 MHz band a spectrum "shortfall" would still exist.

THE LAND MOBILE RESERVE....

The final recommendation of the Land Mobile Communications Council is, however, that the spectrum needed for land mobile operations should come from the "800-MHz reserve". The "Land Mobile Reserve" includes UHF channels 70 through 83 (806-890 MHz) and additional spectrum through 960 MHz. (Note that the new WARC 902-928 MHz ham band is in this "reserve.")

The issue of spectrum for land mobile is clouded by the fact that there are nine different petitions for radio services that the FCC is considering right now that will use frequencies from the land mobile reserve. Among them are an air-to-ground telephone service aboard commercial air liners, additional cordless phone spectrum, a rail passenger telephone service, a mobile satellite service, PRCS (discussed elsewhere in this issue) and the 902-928 MHz ham band. Clearly the Commission did not consider these services when planning land mobile needs through the end of this century.

"I am a currently licensed Extra Class amateur radio operator and wish to be a Volunteer Examiner. I have never had my station or operator license revoked or suspended. I do not own a significant interest in nor am an employee of any company or entity engaged in making, preparing or distributing amateur radio equipment or license preparation materials. My age is at least 18 years old."

"WOULD YOU LIKE TO BE AN VOLUNTEER EXAMINER under The W5YI Report program. If so, please send a copy of your Extra-Class (only) license and a SASE to: W5YI - VEC, PO Box #10101, Dallas, Texas 75207. Our next issue will cover HOW TO GIVE A HAM TEST." using testing materials available in the marketplace.

FCC ISSUES NEW VEC INSTRUCTIONS....

All VEC's received a package from the FCC this past week containing information concerning handling "Reimbursement of Out-of-Pocket Costs for Volunteer Administered Amateur Radio Examinations." The new instructions were postdated August 31, 1984, and take into consideration the new rules allowing expense recoupment.

The following is a recap of the points that will prove most interesting to you....

(1.) - Test Design: The ARRL originally suggested that the VEC (Volunteer Examiner Coordinator) design the amateur radio operator tests rather than the FCC. The Capitol Hill Amateur Radio Society petitioned to eliminate the requirement that the FCC select the questions from the test pool.

Effective August 31, 1984, the VEC will select the questions from the pool. Beginning January 1, 1987, Volunteer Examiners may also design (select the questions) to the General, Advanced and Extra Class examinations. (Note the word "may" - the VEC can also do it.)

(2.) - Identifier (suffix) Codes for upgraded applicants are being changed to "KT" for Technician, "AG" for General Class, "AA" for Advanced Class and "AE" for Amateur Extra Class. Thus a Technician that passes a General Class examination will sign "temporary AG" after his call sign on voice - "/AG" on CW. Temporary operating authority is extended to one year or until the applicant's upgraded operator license is received whichever comes first..

(3.) - Any type of Morse code test can be given at 13 and 20 wpm including solid copying for one continuous minute and message content examinations. CW sending tests are optional since the FCC has found that receiving Morse code text is evidence enough of sending ability.

(4.) - Examination Cost Reimbursement up to a maximum of \$4.00 is authorized. This amount will adjusted each January 1 "for changes in the Department of Labor Consumer

Price Index."

The FCC refused to specify who should collect the fee. "We envision that the VE's and the VEC's will develop a close working relationship and will be able to decide themselves what works best for them," the FCC said. "They must decide what portion of the fee each will get."

Volunteer Examiners may not be compensated for their services and no out-of-pocket expenses in connection with the Novice Class license can be reimbursed. It is not necessary that any fee be returned to applicants who fail to show up for an examination session.

(5.) - Reimbursable Expense List will not be published by the FCC. "We believe it is inadvisable to attempt to pinpoint permissible or prohibited reimbursable expenses. Any list that we compiled would necessarily be incomplete. Rather, the guideline that we establish is that if the expense relates to the amateur radio operator examination, it is a legitimate reimbursable expense."

(6.) - Expense Records must be kept by both the VE's and VEC's if reimbursements are sought for expenses incurred. "They must certify on or before January 31 of each year to the Commission's office in Gettysburg, PA 17325 that all expenses for the period from January 1 to December 31 of the preceding year for which reimbursement was obtained were necessarily and prudently incurred."

It is not necessary to submit a detailed expense breakdown to the FCC, but these records must be retained by each VEC and VE for 3 years and made available to the FCC upon request.

(7.) - VE Expense Certifications: "Each Volunteer Examiner must forward on or before January 15 of each year the certification concerning expenses to the VEC who coordinated the efforts of the VE and for which reimbursement was received. The VEC must forward all such certifications and its own certification concerning expenses to the FCC on or before January 31 of each year." The VEC must disaccredit any volunteer examiner who fails to provide the annual certification.

It is not required that a VE or VEC accept reimbursement and "A VEC may not discriminate in accrediting volunteer examiners based upon their accepting or declining to accept reimbursement."

(8.) - Fee Determination - Each year (August 31 through December 31 for 1984 and January 1 through December 31 for following years) the VEC "must determine the reimbursement fee, if any to be charged each candidate at the examination sessions coordinated during the year." This is done by taking into consideration the estimated number of tests anticipated, associated costs and fee distribution between the VE and the VEC.

(9.) - Charging Fees to Applicants - "The reimbursement fee is the only fee that may be charged a candidate for the administering of an examination. If the examination session is held in conjunction with a hamfest, convention or other gathering, any fee charged for admission to the gathering must be separate and apart from the examination fee. A candidate must not be required to pay a hamfest entrance fee in order to take an examination."

No fees can be charged for Novice Class examinations since this is a different (non-reimbursable) program. Since examination requirements for the Novice Class (Elements 1A and 2) are a prerequisite for other operator classes they may be administered in conjunction with the Technician Class which is reimbursable. If the applicant fails the Tech test, the VE must certify on the Form 610 that the applicant failed Element 3, but passed Element 1A and 2 and is eligible for the Novice ticket only.

(10.) - Registration Deadlines may be set for examination sessions or they can be the same day as the examination. "In any event, the VE's must make a public announcement before each examination session. The announcement must show the amount of reimbursement fee (if any) required from each candidate and where and how it is to be paid." Furthermore, the FCC District Field Office which has jurisdiction over the area where the examination is to be held must be notified of the time, place, registration

requirements and amount of the reimbursement fee (if any) and where it is to be paid 30 days in advance of the examination session deadline.

COMMERCIAL HAM TESTING MATERIALS

In our proposal to be a VEC we said we would be using license preparation and testing materials available in the commercial marketplace. We have been working primarily with four different publishers - Ameco Publishing Corp. (Mineola, NY), Bash Educational Services (San Leandro, CA), CompuSoft Publ. (El Cajon, CA) and Radio School, Inc. (Costa Mesa, CA). I have furnished all of them with the FCC test question and answer pool.

Dick Bash, KL7IHP, reported to me that he will have several versions of all tests available. This is being worked on now but no availability date has been furnished. CompuSoft (Dave Lien, W6OVP) is interested in publishing an annual amateur radio testing manual. I have put him in touch with Gordon West, WB6NOA, of Radio School, Inc., to assist with the writing and editing. All tests will be approved by myself.

Only Ameco has tests available thus far for purchase. The General Class test is ready now, the Advanced Class will be available August 31st with the Extra Class by September 10th. These three different tests follow the formula and question format of the PR Bulletin 103 series and are available only to accredited VE's and VEC's since only one version is available at present.

We have furnished Marty Schwartz of Ameco a list of our accredited volunteer examiners. Other VEC's may want to do the same. (Send to: Ameco Publishing Corp., 220 East Jericho Turnpike, Mineola, NY 11501.) Cost is \$1.00 per test version plus postage of 50 cents. (The postage on 6 to 10 copies is 75 cents, \$1.00 for 11 to 25 copies.)

Excellent code test tapes are available from West Radio School, Inc. Cost is \$9.95 each for the 13 wpm code test or the 20 wpm. Send to: Gordon West WB6NOA, 2414 College Drive; Costa Mesa, CA 92626. Tell him which VEC you are a VE for.